Claims

1. A liquid crystalline oxetane compound represented by the formula:

 $Z^{1}-(CH_{2})_{n}-L^{1}-P^{1}-L^{2}-P^{2}-L^{3}-P^{3}-L^{4}-(CH_{2})_{m}-Z^{2}$ (1) wherein Z^{1} and Z^{2} are each independently a group represented by any one of formulas (2), (3) and (4) below, L^{1} , L^{2} , L^{3} , and L^{4} each independently indicate direct bond or are a group represented by any of -O-, -O-CO-, or -CO-O-, P^{1} and P^{2} are each independently a group represented by formula (5) below, and P^{3} indicates direct bond or is a group represented by formula (5) below, n and m are each independently an integer of 0 to 8;

$$0 \longrightarrow 0 - , \quad 0 \longrightarrow 0 - , \quad 0 \longrightarrow X$$

$$(2) \qquad (3) \qquad (4) \qquad (5)$$

wherein X is selected from the group consisting of hydrogen, methyl, or halogen.

2. The liquid crystalline oxetane compound according to claim 1 wherein Z^1 and Z^2 are each independently a group represented by formula (2), L^1 and L^4 are each independently a group of -O-, L^2 is a group of -CO-O-, L^3 is a group of -O-CO-, P^1 and P^3 are each independently 1,4-phenylene group, and P^2 is 1,4-phenylene group or methyl-substituted 1,4-phenylene group.

- 3. A polymerizable liquid crystalline composition containing at least 10 percent by mass or more of the liquid crystalline oxetane compound of claim 1.
- 4. The polymerizable liquid crystalline composition according to claim 3 containing a photo cation generator and/or a thermal cation generator.
- 5. A method of producing a liquid crystal film wherein a layer of the polymerizable liquid crystalline composition of claim 3 or 4 is formed on an alignable film so as to be aligned in a liquid crystal orientation and then polymerized with light and/or heat to fix the aligned structure.
- 6. An optical film comprising a liquid crystal film produced by the method of claim 5.
- 7. The optical film according to claim 6 having a function as any one selected from a uniaxial or twisted retardation film, a cholesteric orientation-type circular polarizing reflection film, and a nematic hybrid orientation-type compensation film.
- 8. A liquid crystal display equipped with at least one optical film of claim 6 or 7.